

CLAIMS

1. A method for transmitting an emergency call including emergency information from a vehicle using an mobile communication system, comprising the steps of:

triggering an emergency call at the vehicle (201, 403),

establishing a data connection (404) to an emergency call assistance center via the mobile communication system,

transmitting emergency information (204, 405) to the emergency call assistance center using the data connection,

establishing a first voice connection (408) to the emergency call assistance center via the mobile communication system, and

transmitting a dual tone multi-frequency message (204, 409) including emergency information using the established first voice connection.
2. The method according to one of claims 1 to 3, further comprising the step of detecting the end of the DTMF message transmitted via the first voice connection at emergency call assistance center.
3. The method according to claim 1 or 2, further comprising the step of determining whether the emergency information have been successfully transmitted (205) to the emergency call assistance center, and

transferring the first voice connection to an emergency assistant at the emergency call assistance center (206, 403) in case the emergency information has been transmitted successfully, and

establishing a second voice connection to a emergency call dispatch center (207) via the mobile communication system in case the emergency information has not been transmitted successfully.
4. The method according to one of claims 1 to 3, wherein the data connection is a WAP connection, and wherein in the step of transmitting emergency information to the emergency call assistance center via the data connection (204, 405), the emergency information are transmitted in a request of an emergency call URL using the WAP connection.

5. The method according to one of claims 1 to 4, further comprising the step of starting an emergency call countdown (301) during which an occupant of the vehicle may cancel the triggered emergency call.
6. The method according to one of claims 1 to 5, further comprising the step of testing the availability of the mobile communication system (202).
7. The method according to claim 6, wherein in the step of testing the availability of the mobile communication system, a mobile terminal in the vehicle for transmitting the emergency information and the communication network of the communication system are tested for availability.
8. The method according to one of claims 1 to 7, wherein the emergency information transmitted using the data connection comprises the geographical position of the vehicle and an identification number of the vehicle.
9. The method according to claim 8, wherein the emergency information further comprise a timestamp of the generation of the emergency message, a vehicle descriptor, a breakdown status and additional information and parameters defined by an occupant of the vehicle.
10. The method according to claim 8 or 9, wherein the emergency information further comprises a history of information related to a time period before an emergency, wherein the history of information indicates at least one or a combination of the following parameters: the steering of the vehicle, a level of deceleration of the vehicle and a driving direction of the vehicle.
11. The method according to one of claims 1 to 10, wherein the emergency information transmitted using the voice connection comprises the geographical position of the vehicle and an identification number of the terminal transmitting the emergency information.
12. The method according to one of claims 1 to 11, further comprising the steps of synchronizing the emergency information (501) received via the data connection and the first voice connection at the emergency call assistance center, and transmitting a confirmation (406, 410) for the emergency information received from the emergency call assistance center to the vehicle.

13. The method according to one of claims 1 to 12, further comprising the step of the emergency call assistance center requesting emergency information from the vehicle (503) via the mobile communication system.
14. The method according to one of claims 1 to 13, further comprising the step of the emergency call assistance center informing at least one emergency call dispatch center on the emergency (415) using the received emergency information.
15. An emergency call device for transmitting an emergency call including emergency information from a vehicle using an mobile communication system, comprising:
 - a triggering means (111, 112) for triggering an emergency call at the vehicle,
 - a communication terminal (103)
 - for establishing a data connection to an emergency call assistance center 401 via the mobile communication system,
 - for establishing a first voice connection to the emergency call assistance center 401 via the mobile communication system,
 - for transmitting emergency information to the emergency call assistance center 401 using the data connection, and
 - for transmitting a dual tone multi-frequency message including emergency information using the established first voice connection.
16. The emergency call device according to claim 15, further comprising means for determining the end of dual tone multi-frequency message transmitted using the first voice connection.
17. The emergency call device according to claim 15 or 16, further comprising:
 - means for transferring the first voice connection to an emergency assistant at the emergency call assistance center (206, 403) in case the emergency information has been transmitted successfully, and wherein

the communication terminal is adapted to establish a second voice connection to a emergency call dispatch center (207) via the mobile communication system, in case the emergency information has not been transmitted successfully.

18. The emergency call device according to one of claims 15 to 17, further comprising a position determination means (105) for determining the geographical position of the vehicle.
19. The emergency call device according to claim 15 to 18, further comprising processing means (102) for forming emergency information.
20. The emergency call device according to one of claims 15 to 19, further comprising a timer (108) for controlling an emergency call countdown during which an occupant of the vehicle may cancel the triggered emergency call.
21. The emergency call device according to claim 15 or 20, wherein the processing means (102) is adapted to form emergency information comprising the geographical position of the vehicle and an identification number of the vehicle.
22. The emergency call device according to one of claims 19 to 21, wherein the processing means (102) are further adapted to synchronize the emergency information received via the data connection and the first voice connection.
23. The emergency call device according to one of claims 15 to 22, wherein the triggering means is an emergency button (112) or a sensor (111) adapted to trigger an emergency call.
24. An emergency call system for executing the method according to one of claims 1 to 14 comprising at least one emergency call device according to one of claims 15 to 23 and an emergency call assistance center (401).